



## Odin® 150 cfm PTO Compressor Kit Specification<sup>1</sup>

### Compressor Air End

The air compressor must be designed to be installed on the apparatus chassis and have 100% duty cycle. The air compressor shall be an American manufactured, continuous duty, oil-injected type, rotary screw rated up to 150 cfm @ 150 psi. Parts shall be readily available, and stocked in USA with certified service centers in all 50 states. It shall have an additional speed up gearbox designed and integrally built by the compressor manufacturer. Compressor to have side-by-side gear set to provide for maximum ground clearance. A copy of the certification record shall be included.

### Air Receiver/Separator

The air receiver/separator (vessel) must act as an air/oil separator. The vessel shall be powder coated carbon steel material and contain an integrated coalescing oil separator element. The vessel must have a lubricant sight glass no smaller than 2" in diameter. The pressure vessel must have a 200 psi (13.8 b) high-pressure relief valve. The vessel must have a replaceable spin on 25-micron oil filter with safety bypass feature. It must contain an integral, pneumatically piloted, blow down valve. The vessel shall be a horizontal mount design. (A vertical mount air/oil receiver is available as an option.) The vessel shall meet all vessel ASME requirements. Oil carryover is rated 10 ppm or under at full flow.

### Heat Exchanger (standard)

The heat exchanger shall be the liquid-to-liquid type. The heat exchanger shall be constructed of stainless steel material and a compact plate type design.

### Auto Balance Valve

A pneumatic modulating inlet valve mounted on the air end inlet shall control the compressor. An *AutoOdin* balancing system shall be provided to automatically maintain the air pressure within plus-or-minus 5% of the water pump pressure throughout the CAFS operating range. The balance valve will take its pressure signal from the fire pump system.

### Compressor Control panel

The compressor control panel shall include the following controls and instruments. The compressor controls and instruments shall be mounted on a custom designed embossed placard. The standard panel will require the transmission to operate the PTO and be switched from the cab. The optional overspeed panel will have aftermarket controller and switch the PTO from the compressor control panel. The control panel shall include the following:

1. Compressor Control Panel
  - a. Hour Meter
  - b. Compressor Temperature Gauge
  - c. Air Pressure Gauge
  - d. Audio Alarm
  - e. PTO engaged light
  - f. Overspeed light
  - g. Overpressure light
  - h. High temp light.
2. Optional : Overspeed controller panel:
  - a. Hour Meter
  - b. Compressor Temperature Gauge
  - c. Air Pressure Gauge
  - d. PTO engaged light
  - e. Rocker switch / Compressor Engaged Pilot Light,
  - f. Overspeed light
  - g. Overspeed control module attached to rear of display

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<sup>1</sup> Specifications are subject to change and improvements without notice



**Air Intake Assembly**

The kit shall contain all the components necessary to install a remotely mounted air intake filter. The kit shall include:

1. 8” Air Filter
2. Inlet Flexible Duct 3”x10’
3. 4ea, 3” Hose Clamp
4. 2ea, 3” Rubber 90° Elbow
5. Air Intake Hood

**Manuals**

The PTO Compressor Kit shall include an installation and operation manual. One (1) printed manual and one (1) manual on CD shall be provided with each kit.

**Safety Interlocks & Controls**

A PTO over-speed circuit must be provided by the PTO supplier, or the transmission must be programmed with the required speed limitation, to prevent over-speed damage to the compressor.

**Compressor Mounting Bracket**

A precision cut steel mounting bracket shall be provided for the compressor air end. (Specify drivers or passenger side mount)

**Kit Contents**

1. 150 cfm Screw Compressor (Air End)
2. Bracket, Compressor Mount, Laser Cut
3. Air/Oil Receiver, Horizontal Mount
4. Separator filter assembly
5. Bracket Set, Receiver Mount
6. Oil Filter Base, Spin-on, With Filter
7. Inlet Control Valve
8. AutoOdin Compressor Control Manifold
  - a. Calibrated Balance Valve
  - b. Manual Pressure Adjustment Regulator
  - c. Blow down Valve
9. Air Intake Assembly
  - a. 8” Air Filter
  - b. Inlet Flexible Duct 3”x10’
  - c. 4ea, 3” Hose Clamp
  - d. 2ea, 3” Rubber 90° Elbow
  - e. Air Intake Hood
10. Oil Cooler Assembly
  - a. Heat Exchanger, Plate Type, Stainless Steel
  - b. Water Strainer (Clean Water Pick-up)
  - c. ½” Check Valve, Water
  - d. Thermostatic Valve, Oil
11. 3/4” Master Check Valve, Air
12. Companion Flange, For Customer Supplied Drive shaft
13. Compressor Control Panel
  - h. Hour Meter
  - i. Compressor Temperature Gauge
  - j. Air Pressure Gauge
  - k. Shut-Down Relay
  - l. Audio Alarm
  - m. PTO engaged light



- n. Overspeed light
  - o. Overpressure light
  - p. High temp light.
- OR : Optional : Overspeed controller panel:
- q. Hour Meter
  - r. Compressor Temperature Gauge
  - s. Air Pressure Gauge
  - t. PTO engaged light
  - u. Rocker switch / Compressor Engaged Pilot Light,
  - v. Overspeed light
  - w. Overspeed control module attached to rear of display
14. Manual, Installation and Operation
15. 4 gallons oil

The above components come with all necessary hydraulic fittings, and orifices for ease of assembly. Fittings are screwed in loose. All metric threads are converted to NPT, or JIC. System is warranted for one year after start up date.

**Package Requirements (not included with the Odin kit)**

The entire system will require complete plumbing and installation of all of the components. The complete CAF system will require a minimum of the following items. Additional items may be required dependant upon the application and NFPA ratings desired.

1. Transmission PTO and Drive-shaft
2. Fire pump
3. Master Water and Foam check valves
4. Foam injection system
5. Individual water and air mix point control valves
6. Individual water and air mix point check valves
7. Required and desired water, air and foam flow meters and gauges
8. Master and individual line drains